Ordering number:ENN4753

N-Channel Silicon MOSFET

2SK2260

Ultrahigh-Speed Switching Applications

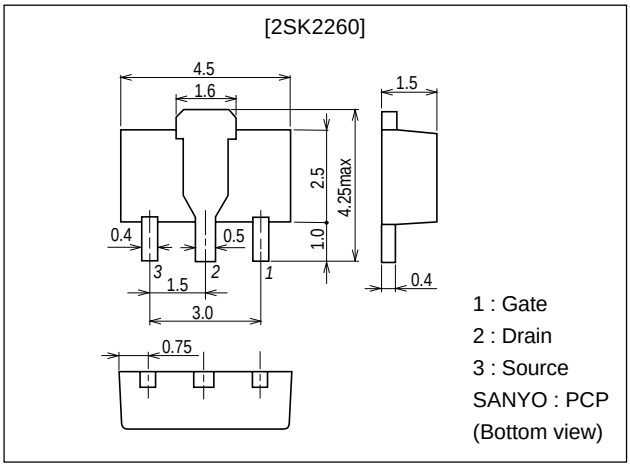
Features

- Low ON resistance.
- Ultrahigh-speed switching.
- Low-voltage drive.

Package Dimensions

unit:mm

2062A



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		150	V
Gate-to-Source Voltage	V_{GSS}		±20	V
Drain Current (DC)	I_D		1.2	A
Drain Current (Pulse)	I_{DP}	PW≤10μs, duty cycle≤1%	4.8	A
Allowable Power Dissipation	P_D	Tc=25°C	3.5	W
		Mounted on ceramic board (250mm²×0.8mm)	1.5	W
Channel Temperature	Tch		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0	150			V
Zero-Gate Voltage Drain Current	I_{DSS}	V_{DS}=150V, V_{GS}=0			100	μA
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=±18V, V_{DS}=0			±10	μA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V, I_D= 1mA	1.5		2.5	V
Forward Transfer Admittance	| yfs |	V_{DS}=10V, I_D=600mA	0.8	1.1		S
Static Drain-to-Source ON-State Resistance	$R_{DS(on)}$	I_D=600mA, V_{GS}=10V		1.6	2.2	Ω

Marking : KO

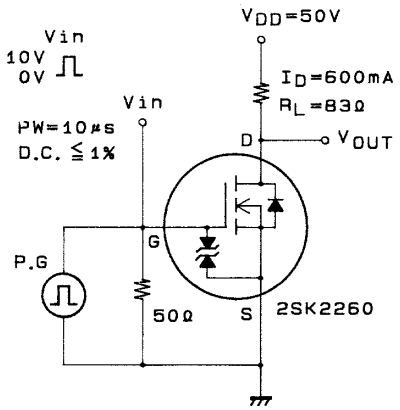
Continued on next page.

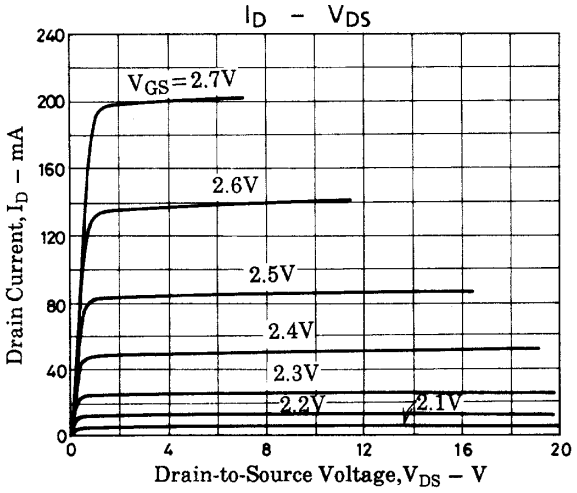
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

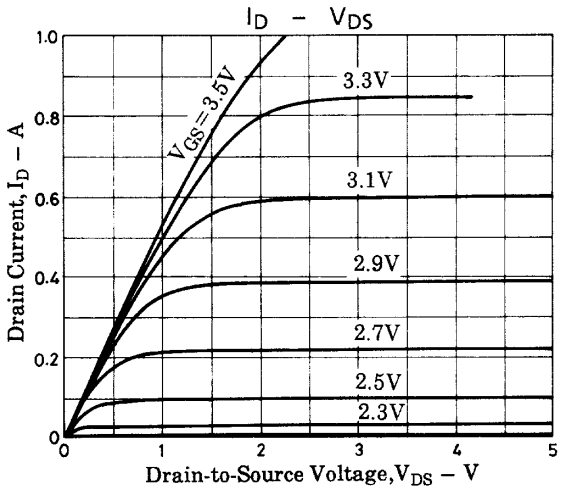
Continued from preceding page.

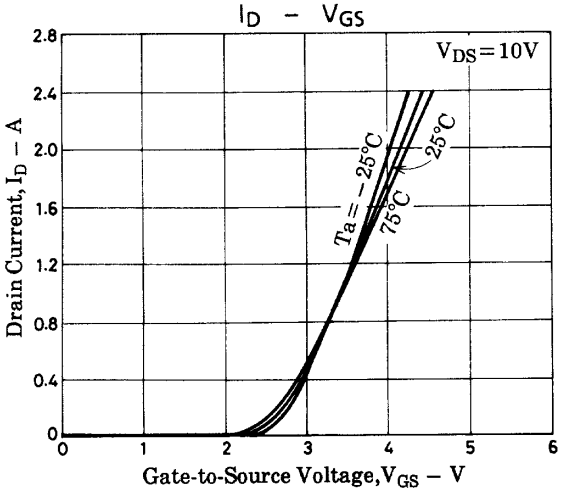
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	V_{DS}=20V, f=1MHz		80		pF
Output Capacitance	Coss	V_{DS}=20V, f=1MHz		25		pF
Reverse Transfer Capacitance	Crss	V_{DS}=20V, f=1MHz		8.5		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit		10		ns
Rise Time	t_r	See specified Test Circuit		15		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit		50		ns
Fall Time	t_f	See specified Test Circuit		30		ns
Diode Forward Voltage	V_{SD}	I_S=1.2A, V_{GS}=0		1.0		V

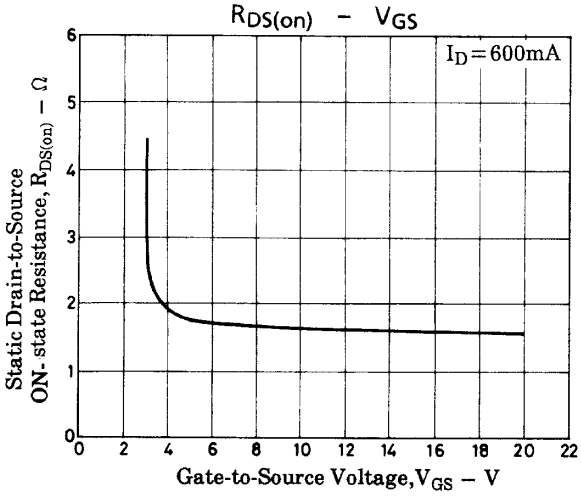
Switching Time Test Circuit

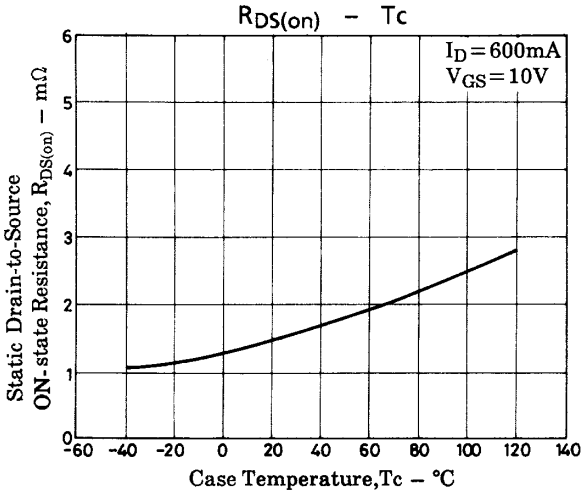


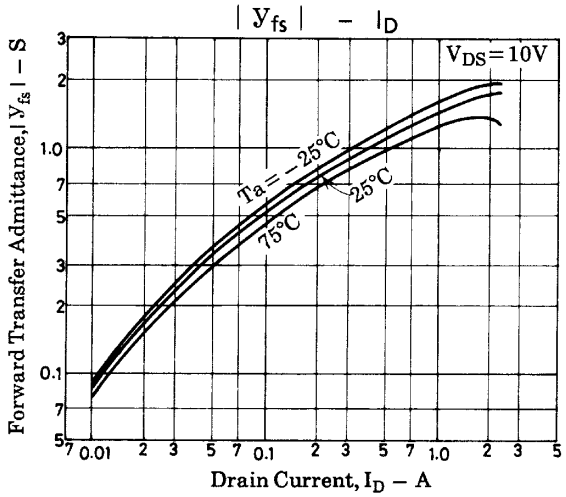


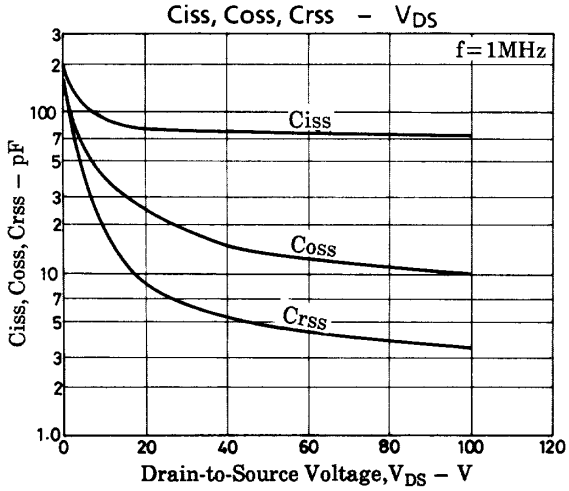


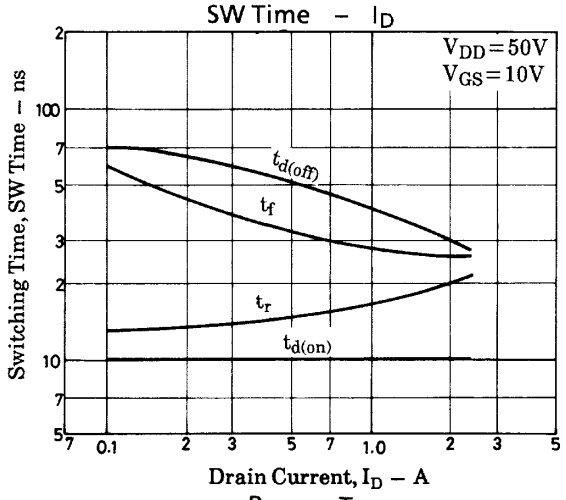


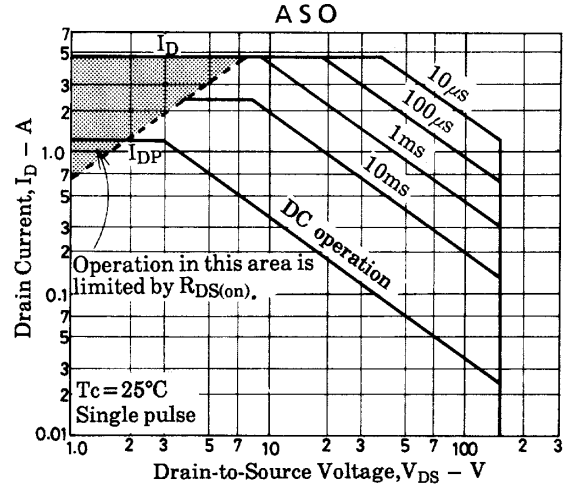


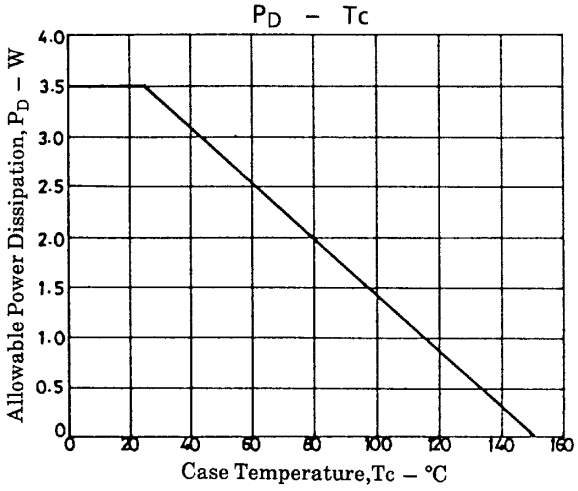

RDS(on) – Tc
ID=600mA
VGS=10V
Static Drain-to-Source ON-state Resistance, RDS(on) – mΩ
Case Temperature,Tc – °C

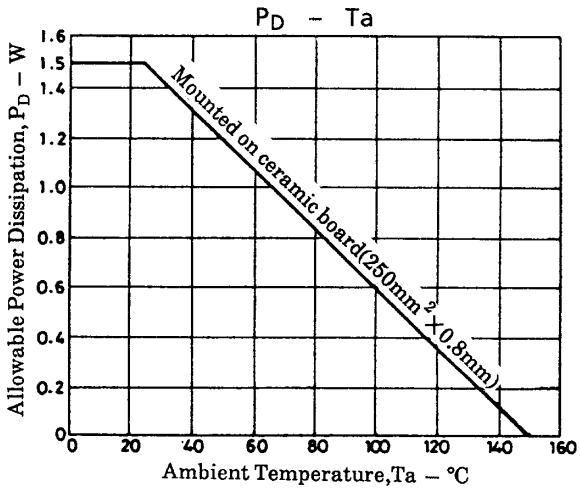

| yfs | – ID
VDS=10V
Ta=–25°C
25°C
75°C
Forward Transfer Admittance,| yfs | – S
Drain Current, ID – A


Ciss, Coss, Crss – VDS
f=1MHz
Ciss
Coss
Crss
Ciss, Coss, Crss – pF
Drain-to-Source Voltage,VDS – V


SW Time – ID
VDD=50V
VGS=10V
td(off)
tf
tr
td(on)
Switching Time, SW Time – ns
Drain Current, ID – A


A S O
ID
IDP
10μs
100μs
1ms
10ms
DC operation
Operation in this area is limited by RDS(on).
Tc=25°C
Single pulse
Drain Current, ID – A
Drain-to-Source Voltage,VDS – V


PD – Tc
Allowable Power Dissipation, PD – W
Case Temperature,Tc – °C


PD – Ta
Mounted on ceramic board(250mm² ×0.8mm)
Allowable Power Dissipation, PD – W
Ambient Temperature,Ta – °C